

The object of this patent refers to a machine for processing meat wastes deriving from the slaughter of big or small animals, to be used by slaughter-houses in their by-product processing units, for the obtention of industrial fats and proteic meat and bone flours, for the manufacture of balanced fodders.

The machines which are currently being used for this purpose are intermittent, one or more units per slaughter-house being used, depending on the amount to be processed.

The processor which is now being disclosed is meant to process the by-products in a continuous manner, the heating being effected by means of saturated steam.

It is made up of sealed stages, wherein the material is continuously entering, passing through a chopper which regularizes the dimensions of the materials, in order to make the cooking homogeneous. Thereafter, it is stirred, at each stage, by the mixing paddles which also direct the material towards the sluiceways, which open at times pre-established by the micro-processor, and let the material fall due to the effects of gravity, towards the next stage, until the final and bottom stage is reached, from which it falls into the equalizing vat, where it is dipped in hot liquid fat which is then separated and transported by a helicoid conveyor towards an out-put sluice-gate, where it is collected and receives the final processing, that is pressing, grinding and cooling, which produces the mixed meat and bone flours used for manufacturing animal fodders.

In order to achieve a better understanding of the disclosure, the object of this patent is represented in:

FIG. 1_ A perspective view;

FIG. 2- A sectional view;

As may be seen in the attached figures, the object of this patent is a metal structure, basically cylindrical (1), having, on the outside thereof, steam-input pipes (2) and condensate-output pipes (3) and a gas-output pipe (4).

On the top portion thereof there is a product input sluiceway (5), where there is a chopper (6) and the motoring (7) of the vertical axis (8) of the mixing paddles.

At the bottom thereof there is an output sluiceway (9), a tilted equalizing cylindrical vat (10) and an output sluiceway (11).

Within the metal structure (1) there are several sealed separators (12), which separate the different processing stages, where the separators are heated by steam pipes (15), connected to the steam input pipes (2) or the condensate output pipes (3). The vertical axis (8) passes between such separators, to which, at diametrically opposite positions, the mixing paddles (13) are fixed. Also, at diametrically opposite positions, are the sluiceways (14), which are hydraulically or pneumatically operated, commanded by an electronic processor which controls the opening time. At each stage there is a gas exhaust pipe (16), which collects the gases and directs them towards the gas-output pipe (4), where they are driven through the anti-pollution treatment unit.

After the material has gone through all the processing stages, it falls through the output sluiceway (9) into the cylindrical equalizing vat (10), with a steam-heated jacket, at the bottom thereof, with molten fat, and in whose interior there is a helicoid conveyor (17), powered by a reduction engine (19) which moves the material towards the output sluiceway (11), where it is collected for further processing. The equalizing vat has an output pipe for excess fat (18), which is collected for latter use.

The material to be processed enters continuously, driven by the conveyor belt or other means, through the product-input sluiceway (5), where there is a chopper (6) which homogenizes the material, which falls to the first stage due to gravity, is heated by steam by means of steam pipes (15) with the others, and is mixed and moved so that all the batter may be homogeneously heated by mixing paddles (13), which may be heated or not. Such paddles are fixed at diametrically opposite positions, from one stage to the other, they rotate powered by the vertical axis (8). At pre-determined times, which vary according to the origin of the material, a command processor opens the sluiceways (14), letting the material fall to the following stage. The mixing paddles (13) carry the material towards the sluiceways opening, making it fall. After the final stage, the material falls in the form of molten fat, to the bottom of the cylindrical equalizing vat (10), where the final processing takes place, being thereafter carried through a helicoid conveyor (17) to the output sluiceway (11).